Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

Title V draft permit No. V-99-030
QUEBECOR PRINTING FRANKLIN
FRANKLIN KY.
June 2, 2000
MARGARET MORRISON, REVIEWER
Plant I.D. #105-3740-0022
Application Log # F444

SOURCE DESCRIPTION:
Quebecor Printing Franklin is a publication rotogravure printing plant which prints magazines, catalogs, flyers, and newspaper inserts. Printing takes place on five large publication rotogravure presses with two presses having an additional flexographic imprinter attached. The presses are controlled by a carbon adsorption system/solvent recovery system. Three natural gas fired boilers with #2 fuel oil as backup are used to supply steam to the facility. Two fuel oil tanks are used to hold the backup fuel supplying the boilers. Four cooling towers are used to cool the spent steam from the carbon adsorption system. A decant tank then separates the cooled water into water that can be recycled back into the control system and solvent that is recycled to the tank farm. A deaerator is part of the boiler feedwater recycling system.

Other affected facilities are a parts washer, proof press and drum proofer which are also controlled by the carbon adsorption system. Uncontrolled affected facilities are an aboveground tank farm which stores inks and solvents used in the printing process and the pipeline equipment, distillation unit, and two dirty solvent sumps associated with the material transfer process from the tank farm to the presses and back. Also included are two chrome plating lines which are used to plate the cylinders used in the printing presses and a cylinder cleaning operation.The chrome plating tanks in the lines are controlled by composite mesh pads. Three balers which are controlled by baghouses are used to bale the scrap paper from the printing presses. There are also 6 hand correction stations.

An air stripper is used in the wastewater treatment plant. During the packaging process, the ink jet printing operation puts labels on outgoing parcels. Also, two hot melt glueing operation are used in the packaging. Emergency equipment consists of 2 generators - diesel fired, a fire pump - diesel fired, and two diesel fuel tanks.Quebecor Imaging Franklin has been included in this permit. It is located in a separate building on the same property. It is a film and digital image data processing plant.

COMMENTS:
Emissions from the publication rotogravure presses were based on previous permit requirements and information from the company. All of the presses have either BACT or LAER requirements on the VOC emissions as a result of earlier permit requirements - see permit. Also, Presses 3,4, and 5 are subject to the publication rotogravure printing NSPS, 401 KAR 60:005, Subpart QQ - Standards of performance for the graphic arts industry: publication rotogravure printing. Press 1 was built before the required date of this regulation. Press 2 was not built before the required date, but a contract to install was in place before the date, therefore the regulation does not apply. In addition, Press 1 and Press 4 have one in-line flexographic imprinter. The imprinter on Press 1 is exempt from 401 KAR 61:122, Existing graphic arts facilities using rotogravure and

flexography, because it is not in a non-attainment area. The imprinter on Press 4 is subject to the recordkeeping section of 401 KAR 59:212, New graphic arts facilities using rotogravure and flexography, only because the LAER requirement for the press is more stringent than the standard on this regulation. The proof press emissions were also calculated according to previous permits and information from the company. The proof press is no longer subject to 401 KAR 59:212 but will be limited to the previously permitted requirements to preclude PSD review. The drum proofer and parts washer emissions were calculated using material balance with information provided by the company. The parts washer is considered to be existing and is exempt from 401 KAR 61:095, Existing solvent metal cleaning equipment, because it is not in a non-attainment area. The presses, proof press, drum proofer, and parts washer are controlled by the carbon adsorption system/solvent recovery system.Although only Presses 3, 4, and 5 are subject to 401 KAR 60:005, Subpart QQ, ongoing compliance with this regulation will be determined with a plantwide material balance. Several affected facilities with VOC emissions will be included - see permit. With this permit, the overall plantwide efficiency has been determined to be 92.88% based on these affected facilities. However, with the addition of any new controlled affected facilities, the plantwide efficiency could change - see permit.

Emissions from the boilers were calculated using AP42, 1.4. Boiler #3 has a limit on yearly fuel oil throughput to preclude PSD applicability. Boiler 1 and 2 are subject to 401 KAR 59:015, New indirect heat exchangers, while Boiler #3 is subject to 401 KAR 60:005,Subpart Dc - Standards of performance for small industrial-commercial-institutional steam generating units, and 401 KAR 59:015.

The storage tanks emissions were calculated using Tanks 3.1 submitted by the company. Tanks 3.1 was also used to calculate emissions from the distillation unit, the two dirty solvent sumps, and the decant tank. Throughputs were based on the company's information and previous permitting actions. The 12000 gal clean solvent storage tank - SL-2 is subject to 401 KAR 60:005, Subpart Kb - Standards of performance for volatile organic liquid storage vessels(including petroleum liquid storage vessels) for which construction, reconstruction, or modification commenced after July 23, 1984. All of the tanks are uncontrolled.

Emissions from the deaerator and air stripper were based on sampling information supplied by the company. Emissions from the 6 hand correction stations were calculated from information supplied by the company. The ink jet printing operations emissions were also calculated from information supplied by the company. Emissions from the cylinder cleaning were also based on information from the company. Emissions from the pipeline equipment were based on previous permits and the emission inventory system information. These affected facilities are uncontrolled.

Regulation 401 KAR 63:002, Subpart KK - the printing and publishing MACT applies to several of the affected facilities. It includes the presses, proof press, drum proofer, parts washer, deaerator, distillation unit, storage tanks, 6 hand correction stations, pipeline equipment, dirty solvent sumps, decant tank, air stripper, and cylinder cleaning. The required overall efficiency is 92%.

Emissions from the four cooling towers were calculated using AP42, 13.4. The company uses city water in the cooling towers and no longer uses plant water containing VOC's. Therefore, 401KAR 59:212 no longer applies. 401 KAR 63:010, Fugitive emissions, applies to the emissions from the cooling towers now. The cooling towers are uncontrolled.

Emissions from the two plating lines were based on previous information from the company and new information concerning the MACT standard. The plating emissions are subject to 401 KAR 59:010, New process operations. The two chrome plating tanks are subject to 401 KAR 63:002, Subpart N - Chrome plating MACT. Emissions from the two tanks were taken from the required stack test results. The two tanks are controlled by composite mesh pad systems with an efficiency of 99%. The other parts of the plating lines are uncontrolled.

Emissions from the two hot melt glue operations were based on the material safety data sheets. The operations are uncontrolled.

Emissions from the three balers were calculated using previous information from the company. The balers are subject to 401 KAR 59:010. They are controlled by baghouses with an efficiency of 99.9%.

The emergency generators and fire pump emissions were calculated using documents from EPA. They are uncontrolled.

The Quebecor Imaging Plant was added to this permit because it is located on the same property and has the same owner. The plant previously had a separate I.D. number - 105-3740-0038 and was operating under O-91-016. After inspecting the plant, it was determined that numerous changes have been made. Calculations were based on information from the company and material safety data sheets. The boiler emissions were calculated using AP42, 1.4. The affected facilities are uncontrolled.

Additionally, in the past several toxic pollutants had requirements. The major requirement of RACT for toluene has been replaced by the MACT standard, 401 KAR 63:002, Subpart KK. All other toxic pollutants were looked at and found to be below their respective adjusted significant levels as listed in the previous toxic regulation 401 KAR 63:022, New or modified sources emitting toxic air pollutants.

PERIODIC MONITORING:
EU 01(01) Boiler #1 - Periodic monitoring will consist of weekly visual observations from the boiler when burning #2 fuel oil with the results being kept in a log. The log will be reported semi-annually. Also, quarterly Method 9 readings will be taken to assure continuing compliance with opacity requirements if burning #2 fuel oil.

EU 02(03) Press 1 - There are no individual requirements. See Group 2 and Group 3 requirements.
EU 03(05) Press 2 - There are no individual requirements. See Group 2 and Group 3 requirements.
EU 04(07) Press 3 - There are no individual requirements. See Group 2 and Group 3 requirements.

EU 05(10) Boiler #2 - Periodic monitoring will consist of weekly visual observations from the boiler when burning #2 fuel oil with the results being kept in a log. The log will be reported semi-annually. Also, quarterly Method 9 readings will be taken to assure continuing compliance with opacity requirements if burning #2 fuel oil.

EU 06(12) Press 4 - The press has a permanent total enclosure. After testing, to onsure ongoing compliance for the permanent total enclosure - 1.If during the test, the average facial velocity of the air through all natural draft openings is determined to be less than or equal to 500 fpm, the daily pressure differential shall be measured across the enclosure and compared to the differential pressure of 0.007 inch H2O (corresponding to 200 fpm) or 2.If during the test, the average facial velocity of

the air through all natural draft openings is determined to be greater than 500 fpm, fan amps shall be recorded daily and compared to parameters set during the test. If the daily recorded fan amps are below the parameters set during the test, the monitoring shall revert to No. 1 of this section.
Also, see Group 2 and Group 3 requirements.

EU 07(15) Four cooling towers - Periodic monitoring will consist of performing regular cooling tower maintenance as recommended by the vendor to provide reasonable assurance that Section 3(2) of 401 KAR 63:010 is met.

EU 11(21) Proof press - There are no individual requirements. See Group 2 and Group 3 requirements.

EU 14(24) Boiler #3 - Periodic monitoring will consist of weekly visual observations from the boiler when burning #2 fuel oil with the results being kept in a log. The log will be reported semi-annually. Also, quarterly Method 9 readings will be taken to assure continuing compliance with opacity requirements if burning #2 fuel oil. Also, as required by the NSPS, fuel oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted. The owner or operator shall analyze the oil sample to determine the sulfur content of the oil. A 30-day rolling average sulfur content shall be calculated and determined to be below 0.5 weight percent sulfur.

EU 18(31) Storage tank - 12000 gal - Periodic monitoring will consist of keeping records of the dimensions and capacity of the storage tank for the life of the tank as required by the NSPS. Also Group 3 requirements will apply.

EU 21(37) Press 5 - The press has a permanent total enclosure. After testing, to onsure ongoing compliance for the permanent total enclosure - 1.If during the test, the average facial velocity of the air through all natural draft openings is determined to be less than or equal to 500 fpm, the daily pressure differential shall be measured across the enclosure and compared to the differential pressure of 0.007 inch H2O (corresponding to 200 fpm) or 2.If during the test, the average facial velocity of the air through all natural draft openings is determined to be greater than 500 fpm, fan amps shall be recorded daily and compared to parameters set during the test. If the daily recorded fan amps are below the parameters set during the test, the monitoring shall revert to No. 1 of this section.
Also, see Group 2 and Group 3 requirements.

EU 31(47) Ink Jet Printing - There are no periodic monitoring requirements, because there are no regulation requirements.

EU Group 1 - Chrome Plating MACT - Periodic monitoring will consist of the requirement that the permittee shall monitor the pressure drop across the composite mesh-pad system once each day that the affected source is operating as required by the NSPS.

EU Group 2 - Publication rotogravure printing NSPS - Periodic monitoring will consist of a record kept of the amount of solvent and water used, solvent recovered, and estimated emission percentage for each performance averaging period of a calendar month or 4 consecutive weeks. The emission percentage will be calculated according to the procedures under 40 CRF 60.433(b) through (g), or by a comparable calculation which compares the total solvent recovered to the total solvent used at the affected facility. A plantwide material balance will be compared to the required plantwide VOC removal efficiency each month. The reports shall be submitted semi-annually.

EU Group 3 - Printing and publishing MACT - Periodic monitoring will consist of performing a liquid-liquid material balance for each month as follows:

a. Measure the mass of each ink, coating, varnish adhesive, primer, solvent, and other material used by the affected source during the month.

b. Determine the organic HAP content of each ink, coating, varnish, adhesive, primer, solvent, and other material used by the affected source during the month following the procedure in 40 CFR 63.827(b)(1).

c. Determine the volatile matter content, including water, of each ink, coating, varnish, adhesive, primer, solvent, and other material used by the affected source during the month following the procedure in 40 CFR 63.827(c)(1).

d. Install, calibrate, maintain,and operate, according to the manufacturer's specifications, a device that indicates the cumulative amount of volatile matter recovered by the solvent recovery device on a monthly basis.

e. Measure the amount of volatile matter recovered for the month.

f. Calculate the overall effective organic HAP control efficiency for the month using the equation specified in the permit.

g. Compare the calculated control efficiency to 92% to determine compliance with the MACT standard.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.